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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/749,581

12/31/2003

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AUS920030118US1

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09/15/2006

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EXAMINER

MEMULA, SURESH

ART UNIT

PAPER NUMBER

2825

DATE MAILED: 09/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/749,581	Applicant(s) ROESNER ET AL.	
	Examiner Suresh Memula	Art Unit 2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. **Claim 13 is rejected under 35 U.S.C. 101** because the claimed invention is directed to non-statutory subject matter. Computer programs are non-statutory, per se, and Claim 13 fails to define the structural and functional interrelationship between computer program and computer system; the computer program product must be claimed as a computer-readable medium on which to permit the computer program's functionality to be realized, and further must recite the execution of the computer program by the computer system (e.g. which when executed by the computer performs).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph**, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. In Claims 1, 7, and 13, the term "multi-cycle" in "multi-cycle simulation" renders the claims indefinite since the term fails to distinctly identify what it is meant to encompass.
6. In Claims 2, 8, and 14, the phrase "regular expression" renders the claims indefinite since the phrase fails to distinctly identify what it is meant to encompass.
7. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).
8. Claims 2-6, 8-12, and 14-18 are rejected for their dependencies on rejected base Claims 1, 7, and 13, respectively.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. **Claims 1-18 are rejected under 35 U.S.C. 102(e)** as being anticipated by Fields, JR. et al. (US Pub. No. 2005/0050509).

11. As to Claim 1, and similarly recited Claims 7 and 13,

receiving a configuration database (Paragraph 0038; FIG. 8) including at least one data structure (See one or more of: Paragraphs 0007, 0009, 0038, 0059, 0153-0154) representing an instance of a Dial entity (Paragraph 0006), wherein said instance of said Dial entity has at least an input, an output, and at least one associated latch within a digital design (Paragraph 0006), wherein a value of the output of the instance of the Dial entity controls a value stored within the at least one associated latch (Paragraph 0006);

receiving a control file (Paragraphs 0009, 0038; FIG. 8), wherein said control file indicates that at least one associated latch data structure is to be inserted within the configuration database to represent said at least one associated latch during multi-cycle simulation (Paragraphs 0009, 0038); and

in response to receipt of the configuration database and said control file (Paragraph 0038), processing said configuration database with reference to said control file (Paragraph 0038) to insert within said configuration database at least one latch data structure and to associate (Paragraph 0038), within said configuration database, the at least one latch data structure with the instance of the Dial entity (Paragraph 0038).

12. As to Claim 2, and similarly recited Claims 8 and 14, receiving a control file (Paragraphs 0009, 0038; FIG. 8) identifying said at least one associated latch

utilizing a regular expression (Paragraphs 0009, 0038).

13. As to Claim 3, and similarly recited Claims 9 and 15, wherein said at least one latch data structure comprises a second latch data structure (Abstract; Paragraph 0009), and wherein receiving said configuration database comprises receiving a configuration database containing a first latch data structure corresponding to said latch within the digital design (Abstract; Paragraphs 0009, 0038).

14. As to Claim 4, and similarly recited Claims 10 and 16, receiving the configuration database comprises receiving a configuration database including a mapping data structure (Paragraph 0059) uniquely associating each of a plurality of different possible input value sets that may be received at the input of said instance of said Dial entity with a respective one of a plurality of different output value sets that will correspondingly appear at said output (Paragraph 0059); receiving said control file comprises receiving a control file containing polarity information indicating a relative polarity (Paragraphs 0064, 0072) of the value contained within the second latch data structure with respect to said first latch data structure (Abstract; Paragraphs 0009, 0039); and processing said configuration database further comprises augmenting said mapping data structure (Paragraph 0072), by reference to said polarity information, with mapping information indicating values to be loaded into said second latch data structure in response to various input values received at said input of said instance of said Dial (Paragraph 0072).

15. As to Claim 5, and similarly recited Claims 11 and 17, receiving said control file comprises receiving a control file containing an addition rule (Paragraph 0008) for generating a name (Paragraphs 0049, 0147) for said at least one latch data structure; and processing said configuration database comprises generating a name for said at least one latch data structure in accordance with said addition rule (Paragraph 0153).

17. As to Claim 6, and similarly recited Claims 12 and 18, wherein said at least one associated latch is a slave latch of a master-slave latch pair (Paragraph 0006), and wherein processing said configuration database with reference to said control file to insert within said configuration database at least one latch data structure comprises

processing said configuration database to insert a latch data structure representing a master latch of the master-slave latch pair (Paragraph 0006).

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suresh Memula whose telephone number is (571) 272-8046. The examiner can normally be reached on M-F 8am-4:30pm EST.

19. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Chiang can be reached on (571) 272-7483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PAUL DINH
PRIMARY EXAMINER



Suresh Memula
Art Unit 2825
September 11, 2006